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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,732	03/30/2001	Yukio Hemmi	016887/1038	5467

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EXAMINER	
KEITH, JACK W	
ART UNIT	PAPER NUMBER
3641	

DATE MAILED: 12/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

SK

Office Action Summary

Application No.	Applicant(s)
09/821,732	Hemmi et al
Examiner	**Art Unit**
Jack Keith	3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *1* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Oct 4, 2002*.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☐ Claim(s) _____ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☒ Claims *1-20* are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Election/Restriction

1. Based upon applicant's election it is noted that various species regarding the separating and removing device location and the corrugated plate coating exist. Accordingly, the restriction/election of Paper no. 9 is withdrawn by the examiner. A new restriction/election follows. Any inconvenience to applicant is regretted.

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-18, drawn to an apparatus (nuclear power plant), classified in class 376, subclass 313.

II. Claim 19, drawn to a process (method of lowering pressure vessel temperature), classified in class 376, subclass 277.

III. Claim 20, drawn to a process (method of supplying non-radioactive water to the nuclear power plant), classified in class 376, subclass 308.

3. The inventions are distinct, each from the other because of the following reasons: Inventions II/III and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the apparatus as

claimed can be used to practice another and materially different process such as the removal of contaminants from conventionally fired power plants, such as co-generation facilities.

4. Inventions II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not disclosed as capable being used together and they have different modes of operation. Invention II is a process involving the cooling of the pressure vessel during a shutdown, the process does not require non-radioactive fluid as the source of the cooling fluid. Invention III is a process wherein water is sprayed in the pressure is from a non-radioactive source, such could be used as makeup water to the reactor system or as the normal spray wherein the non-radioactive fluid prevent carryover of radioactive particles to other systems such as the steam turbine. Clearly each of the these inventions II and III have different functions and different effects as set forth above.

5. However, even if inventions II and III are construed as related; inventions II and III can be shown related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention III has separate utility such as a makeup water reactor system. While invention II, can utilize radioactive fluid (reactor coolant) as the cooling fluid. See MPEP § 806.05(d).

6. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

7. Upon election of invention I, the applicant is further required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims are generic):

IA. Embodiment wherein the separating and removing apparatus is placed in the reactor water system attached to the nuclear reactor.

IB. Embodiment wherein the separating and removing apparatus is placed in the pressure vessel.

IC. Embodiment wherein the separating and removing apparatus is placed in a steam passage extending between the pressure vessel and an inlet of the steam turbine.

8. Upon election of one of species IA, IB or IC, the applicant is further required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims are generic):

A. The embodiment of figure 2.

B. The embodiment of figure 5A.

C. The embodiment of figure 6.

D. The embodiment of figure 7.

9. Upon election of species A only, the applicant is further required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims are generic):

a. The embodiment wherein no electric or magnetic field is formed between the corrugated plates.

b. The embodiment wherein an electric field is formed between the corrugated plates.

c. The embodiment wherein a magnetic field is formed between the corrugated plates.

10. Upon election of species a, b or c, the applicant is further required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims are generic):

i. The embodiment wherein the plate surface is coated with ion exchange material by high temperature oxidation.

ii. The embodiment wherein the plate surface is coated with fibers of the ion exchange material.

iii. The embodiment wherein the plate surface is cleaned then coated with ion exchange material by spray method (n-p type coating).

11. Upon election of one of species i-iii, identified above the applicant is further required to elect a single ultimate species of the following under 35 USC 121 for the purpose of examination. This additional requirement is to facilitate examining due to the broad range of materials or compositions that can be included as the ion exchange material:

(1) Elect the ion exchange material.

Note: In regard to the single ultimate species election of species (1). Applicant is required to make an election of the filter aid particle material; the election should not be open-ended (i.e., comprising). An open-ended election will be considered non-responsive. For example:

(1) The ion exchange material consisting of TiO_2 only.

12. Upon election of species B, C or D, the applicant is further required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims are generic):

d. The embodiment of figures 4A and 4B (no filter aid precoat present/added).

e. The embodiment of figure 5B (filter aid precoat present/added).

13. Upon election of species e only, the applicant is further required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims are generic):

ei. The embodiment wherein the filter aid particles are held on an outer circumference of the hollow member pipe.

eii. The embodiment wherein the filter aid particles are coated on an outer circumference of the hollow member pipe.

eiii. The embodiment wherein the filter aid particles are floating about an outer circumference of the hollow member pipe.

14. Upon election of species ei-eiii only, the applicant is further required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims are generic):

e(1). Embodiment wherein the strainer is disposed outside the hollow member pipe only.

e(2). Embodiment wherein the strainer is disposed inside the hollow member pipe only.

e(3). Embodiment wherein the strainer is inside and outside the hollow member pipe.

15. Upon election of the species d or e, identified above the applicant is further required to elect a single ultimate species of the following under 35 USC 121 for the purpose of examination. This additional requirement is to facilitate examining due to the broad range of materials or compositions that can be included in the hollow member pipe apparatus:

f. Elect hollow member pipe material (see claim 17).

Note: In regard to the single ultimate species election of species f. Applicant is required to make an election of the hollow member pipe material; the election should not be open-ended (i.e., comprising). An open-ended election will be considered non-responsive. For example:

f. The hollow member pipe material consisting of ZrO_2 only.

16. Upon election of the species e, identified above the applicant is further required to elect a single ultimate species of the following under 35 USC 121 for the purpose of examination. This additional requirement is to facilitate examining due to the broad range of materials or compositions that can be included as the filter aid particles:

g. Elect filter aid particle material (see claim 16).

Note: In regard to the single ultimate species election of species g. Applicant is required to make an election of the filter aid particle material; the election should

not be open-ended (i.e., comprising). An open-ended election will be considered non-responsive. For example:

g. The filter aid particle material consisting of TiO_2 only.

17. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

18. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

19. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jack Keith whose telephone number is (703) 306-5752. The examiner can normally be reached on Monday through Friday from 7:00 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone, can be reached on (703) 306-4198. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

Jack Keith
Examiner,
Art Unit 3641

jwk

December 10, 2002